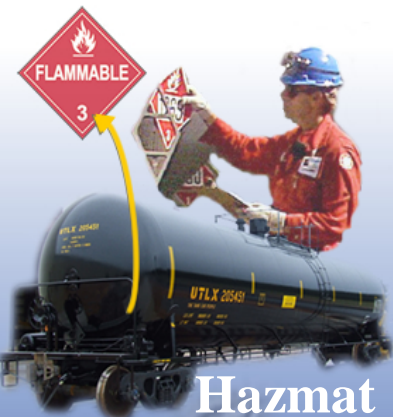




**Railroad
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Enhancing Railroad Hazardous Materials Transportation Safety Rail Routing

Kevin R. Blackwell

Radioactive Materials Program Manager

Hazardous Materials Division

Federal Railroad Administration

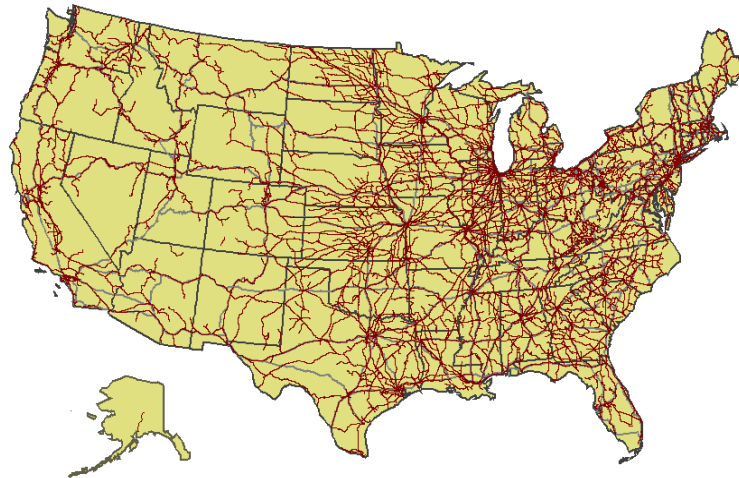
Presentation for the DOE NTSF Meeting

May 14-16, 2013

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Our Regulated Community



- More than 550 railroads
 - 170,000 miles of track
 - 220,000 employees
 - 1.3 million railcars
 - 20,000 locomotives
- 3,500 chemical shippers
- Roughly 2 Million annual HM shipments

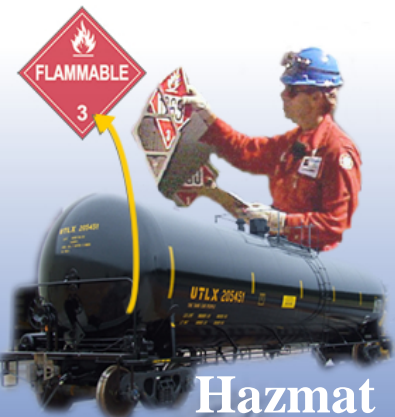
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Need for a National Approach

- At least 14 cities and 1 state considered rail routing requirements
- Potential Impact on National Transportation System
- Need arose for national uniformity
 - Criteria for analyzing risk
 - Central Arbiter of routing decisions
 - Methodology and tools

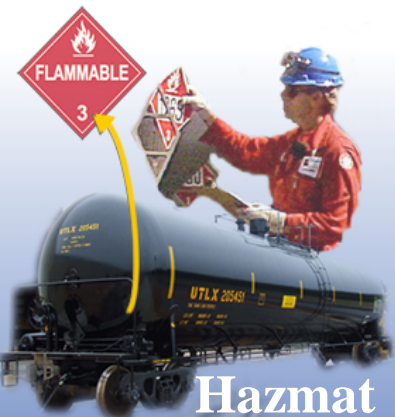
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HM-232E Introduction

- Notice of Proposed Rulemaking
 - Issued December 21, 2006
- Interim Final Rule
 - Issued April 16, 2008
 - *Effective June 1, 2008*
 - *Voluntary compliance May 16, 2008*
 - IFR because of 9/11 Commission Act requirements
- Final Rule
 - Issued November 26, 2008

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Regulations

Located in **49 CFR 172.820**, 172.822 &
Appendix D to Part 172

- Applicability
- Primary and alternate rail route analysis
- Route selection
- Route analysis completion
- Rail carrier POC's on routing issues
- Storage, delays in transit and notification
- Recordkeeping
- Compliance and enforcement



Regulations

Located in 49 CFR 172.820, **172.822** &
Appendix D to Part 172

- Preemption – States that any law, order, or other directive of a state, political subdivision of a state or a Native American tribe that designates, limits, or prohibits the use of a rail line (other than a rail line owned by a state, political subdivision of a state or a Native American tribe) for the transportation of hazmat, including, but not limited to, the materials specified in 172.820(a), is preempted

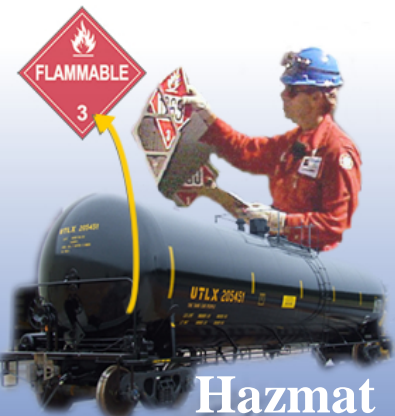
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Requirements

- Collect data annually
 - Certain high hazard materials
 - By route
- Use previous years data to analyze routes safety and security
- Analyze for a primary and alternate route
- Choose safest/most secure route – primary and alternate
- Allow DOT/DHS to see the data and analysis
- Reduce storage/delays in transit
- Perform security inspections
- Separate appeal process (49 CFR 209.501)

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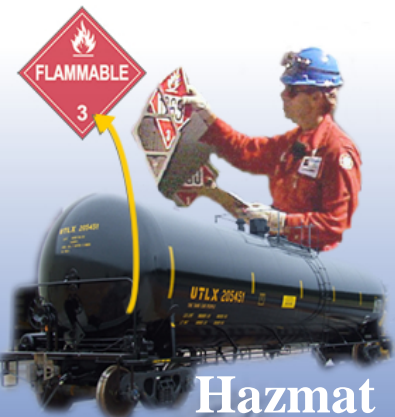
Applicability

Applies to Carriers transporting:

- Security Sensitive Materials
 - Designated by DHS
- Includes:
 - >5,000 lbs Division 1.1, 1.2, or 1.3 (single carload)
 - A bulk quantity of PIH (includes NH_3)
 - A Class 7 material in HRCQ Quantity



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Collecting Data

- Commodity data must be kept and compiled by carriers for the previous *calendar* year
 - Complete by 90 days after end of CY
 - 2008 contained only 6 months (7/1 to 12/31)
 - *Unless using delay provisions*
- Collected by route, line segment or series of line segments
- Commodity data by UN number
 - Can include all Class 7 and 6.1
- Identified by geographic location

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Route Analysis

- In Writing
- Analysis must include Appendix D factors
 - 27 factors are minimum
- Includes:
 - Classification/Switching Yards
 - Sidings
 - Storage Facilities
- Excludes:
 - Offeror/Consignees Facilities
 - Private Sidings/Tracks

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Hazmat

27 Risk Factors

Appendix D to Part 172

- Volume
- Traffic density
- Trip length
- Facility presence/location
- Track Type/Class/Main. Sch.
- Track grade/curvature
- "Dark" vs "Signaled"
- Wayside detector presence
- Grade crossing #/types
- Single vs. Double track
- Turnout freq./ location
- Iconic target proximity
- Env. Sensitive areas
- Population density
- Venues along routes
- Emer. Response Capability
- High Consequence areas
- Passenger traffic
- Train Speed
- Proximity of storage/repair facilities
- Known threats
- Safety/Security measure in place
- Availability of practical alternate routes
- Past incidents
- Transit times
- Crew training & skill levels
- Impact on rail network traffic & congestion

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Hazmat

Selecting the Route

- Select safest/most secure route
- Annual review required
- Restrict disclosure (SSI)
 - Comparative analysis
 - Charts and Graphs
 - System Maps



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Consultation

- Identifying High Threat Targets
- Requires RRs to consult with State, Local, and Tribal Officials
- Two Options
 - Fusion Centers
 - Direct
- Carriers must provide name, title, telephone number, and e-mail address to fusion centers and those officials who contact them

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Security Inspections

- By carriers
 - Acceptance
 - Placed in trains
- Specifics
 - Tampering
 - Suspicious items
 - Compromised security
- Indications
 - Follow security plan
- Commodities
 - 172.820 Materials
 - Ammonium Nitrate
 - HM of Interest (Threat based)



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Storage/Delays in Transit

- Written Revisions to Security Plan
 - Procedure for consulting with shippers and consignees
 - *Mutual consent required*
 - *Measures for minimizing*
 - Preventing unauthorized access to §172.820 materials
 - Mitigating storage risk in population centers
 - Procedures for notifying consignees of delays



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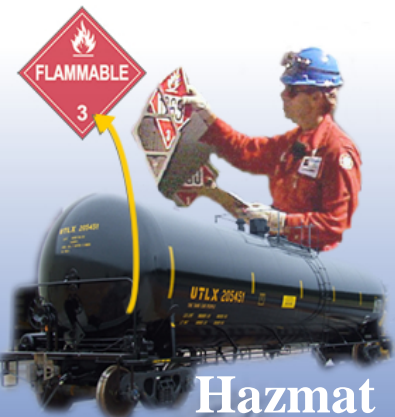


Compliance/Enforcement

- September 1, 2009
 - Initial Analysis
 - *Uses July-December, 2008 data*
 - *Full Compliance with Rule*
 - Written Notification of Delay
 - *Could delay analysis until March 31, 2010*
 - *Must include full 2008 data*
- March 31, 2010
 - Compilation of 2009 shipment data
- March 31, 2011
 - Compilation of 2010 shipment data
- ETC. for each year thereafter



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Compliance/Enforcement Approach

- Early (pre-deliverable) start was made to ensure appropriate approach
 - Coordinated with TSA and PHMSA
 - *Uniformity*
 - *Security Expertise for balanced approach*
- Enforcement program similar to Security Plan Reviews
 - More resource intensive
- Tool developed to enable national route analysis approach - RCRMS
 - DHS funded
 - Production version was online June 1, 2009



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RCRMS

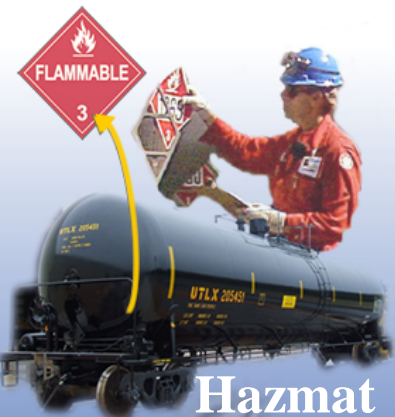
The Rail Corridor Risk Management System (RCRMS) is a tool that can be used by rail carriers to:

- (1) **Maintain HAZMAT commodity flow information**
- (2) **Analyze and compare primary/alternative route risks**

RCRMS assists in complying with the Pipeline and Hazardous Materials Safety Administration's (PHMSA's) regulation entitled "**Enhancing Rail Transportation Safety and Security for Hazardous Materials Shipments**" – not mandatory that rail carriers use it but all Class 1's have.



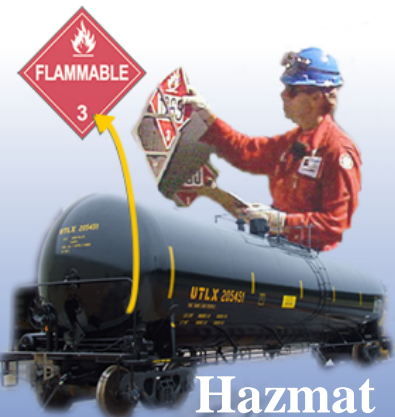
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Enforcement Approach

- In 2010, 2011 2012 and 2013, FRA conducted audits of all Class 1 rail carriers
- FRA Rail Routing Compliance Team (RRCT)
 - Consists of FRA Safety, Policy and Chief Counsel office personnel, along with representatives from TSA and PHMSA.
- FRA will continue to perform annual compliance audits.
- Class 2 and 3 railroads (shortline) also need to comply if they transport addressed materials.
- RCRMS not as viable for smaller RR's as it is for Class 1's.

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Enforcement Approach

- Compliance audits of smaller Class 2 and Class 3 RR's have been done by FRA regional personnel given the much larger # of these rail carriers.
- FRA working with the ASLRRA and the RRF in developing a comprehensive risk assessment tool, similar to RCRMS, that is geared more for the limited operations of smaller rail carriers.
- Initial work began in FY 2012 - first task complete as of beginning of FY 2013 – project completion expected FY 2013-FY 2014 time frame.
- FRA POC for questions or information – Lisa Matsinger, 202-493-0324 / Lisa.Matsinger@dot.gov.



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Moving Ahead for Progress MAP-21

- First multi-year transportation authorization enacted since 2005.
- Funds surface transportation programs at over \$105B for FY 2013 and 2014.
- Transforms the framework for investments to guide the growth and development of country's transportation infrastructure.
- Many aspects and facets to MAP-21 - Subject would warrant its own topic heading with much more time needed to address more completely.
- MAP-21 heavy on highway and transit issues. Little dealing with freight rail issues.



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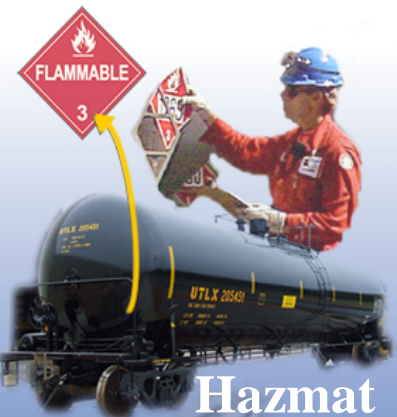


Moving Ahead for Progress MAP-21

- One aspect of MAP-21 is Title III – Hazardous Materials Transportation Safety Improvement Act of 2012 (Sections 33001 to 33017)
- Focuses on safe transportation of hazmat by all modes and provides resources to PHMSA to continue to carry out critical safety missions.
- Title III Highlights:
 - Training Programs -
 - *Training for Emergency Responders: Bill includes provisions to improve training for emergency responders and Hazmat inspectors and investigators.*
 - *Hazardous Material Enforcement Training: Bill authorizes that an enforcement training program be created that establishes uniform performance standards for hazmat inspectors and investigators.*



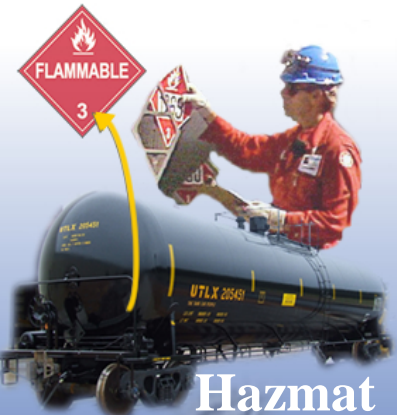
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Moving Ahead for Progress MAP-21

- Title III Highlights continued:
 - Data Collection and Research -
 - *Paperless Hazard Communication Pilot Program:* Grants the authority to conduct pilot projects to evaluate feasibility and effectiveness of using paperless hazard communication systems, (i.e. HMAccess)
 - *Improving Data Collection, Analysis, and Reporting:* Directs that an assessment be conducted of methods used by PHMSA for collecting, analyzing and reporting hazmat accidents and incidents.
 - *Hazardous Material Technical Assessment, Research and Development, and Analysis Program:* Authorizes development and implementation of a program to reduce risks associated with transporting hazmat and the evaluation of new technologies to facilitate safe, secure and efficient hazmat transport.

Railroad Safety



Moving Ahead for Progress MAP-21

- Title III Highlights continued:
 - **Transportation Safety** -
 - *Inspections: Mandates that rulemaking be conducted within 1 year to address resumption of transportation of perishable hazmat after inspection, appropriate training and equipment for inspectors and closing of packages after opening for inspection.*
 - *Highway Routing Disclosures: Mandates new State responsibilities relating to highway disclosures to FMCSA.*
 - *Wetlines: Mandates that GAO evaluate and report on the safety of transporting flammable liquids in external product piping lines of cargo tank motor vehicles.*

Railroad Safety



Moving Ahead for Progress MAP-21

- Title III Highlights continued:
 - Special Permits -
 - *Special Permits, Approvals and Exclusions:*
Mandates conducting rulemaking to establish SOP and objective criteria for the handling of special permits and approvals.
 - Motor Carrier Safety Permits –
 - *Directs FMCSA to conduct a study and submit a report on the implementation of the hazmat safety permit program.*
 - Strengthening Enforcement –
 - *Removes the minimum civil penalty requirement, makes it a violation when a person refuses to grant access to authorized enforcement personnel and mandates that regulations be issued to prohibit hazmat operations if a person does not pay civil penalties.*



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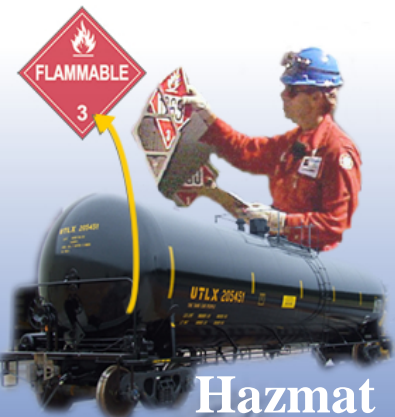
Moving Ahead for Progress MAP-21

For more in-depth info on MAP-21
GO TO:

<http://www.dot.gov/map21>



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Thank You



Still have Question?

- Contact me at 202.493.6315
- Visit FRA's web page at www.fra.dot.gov
- Visit PHMSA's web page at <http://hazmat.dot.gov>
- E-mail me at kevin.blackwell@dot.gov
- E-mail hmassist at hmassist@dot.gov